

(19) World Intellectual Property
Organization
International Bureau



537 332
Rec'd PCT 02 JUN 2005



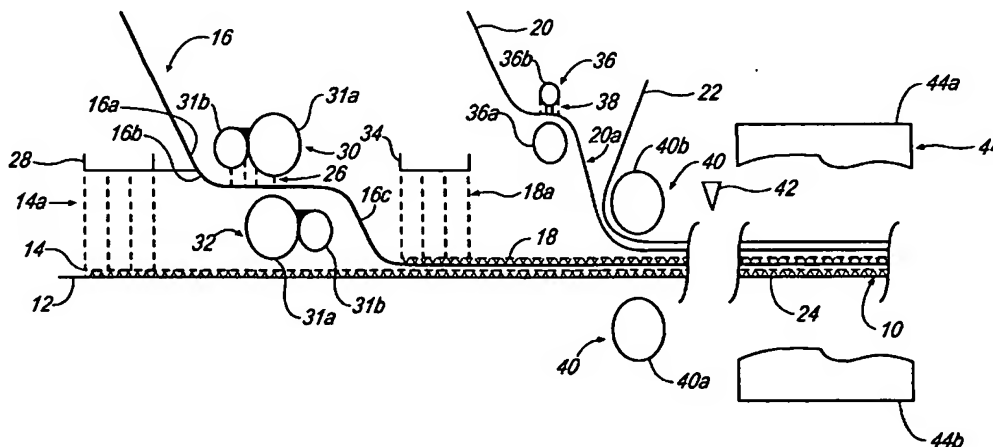
(43) International Publication Date
17 June 2004 (17.06.2004)

PCT

(10) International Publication Number
WO 2004/050429 A1

- (51) International Patent Classification⁷: **B60R 13/02**, B32B 17/04, 27/04
- (21) International Application Number:
PCT/US2003/038042
- (22) International Filing Date: 2 December 2003 (02.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/430,489 2 December 2002 (02.12.2002) US
- (71) Applicant (for all designated States except US): **INTIER AUTOMOTIVE INC.** [US/US]; 600 Wilshire Drive, Troy, MI 48084 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **ASBURY, James, Daniel** [US/US]; 30080 Cobblestone Court, New Hudson, MI 48165 (US). **MARCEAU, Normand, R.** [CA/US]; 4487 Loon Harbor Lane, Linden, MI 48451 (US). **GOROWICZ, Janusz, P.** [US/US]; 11177 Homeshore Drive, Pinckney, MI 48169 (US). **KOCHER, Larry, F.** [CA/US]; 3800 Napier Road, Canton, MI 48187 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LAMINATED HEADLINER ASSEMBLY AND METHOD FOR FORMING A LIGHTWEIGHT LAMINATED HEADLINER



(57) Abstract: A headliner assembly (10) includes a layer of core material (16), a binding agent (26) adjacent to the core material (16), a first layer of chopped fiberglass (14) adjacent to the binding agent (26), a scrim (20) adjacent to the first layer of chopped fiberglass (14), a catalyst (38) adjacent to the scrim (20), a cover stock (22) adjacent to the catalyst (38). The catalyst (38) and the binding agent (26) are mixed together and impregnate the core material when pressure is applied to the headliner assembly (10), thereby resulting in a rigid headliner assembly. A method of forming the headliner assembly (10) is also disclosed.

WO 2004/050429 A1

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US03/38042

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B60R13/02 B32B17/04 B32B27/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B60R B32B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 5 582 906 A (ROMESBERG FLOYD E ET AL) 10 December 1996 (1996-12-10) Laminate comprising layers scrim/adhesive/fibreglass/foam/fibreglass/ film or adhesive/decor. Foam layer impregnated with resin having catalyst premixed therein. column 3, line 65 - column 4, line 62 column 5, line 54 - column 6, line 4 column 6, line 25 - line 31</p> <p style="text-align: center;">----- -/--</p>	1-9

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

11 May 2004

Date of mailing of the international search report

01/06/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Stinchcombe, J

INTERNATIONAL SEARCH REPORT

International Publication No

PCT/US 03/38042

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>EP 0 997 265 A (JOHNSON CONTROLS HEADLINER GMB) 3 May 2000 (2000-05-03) PU foam impregnated with diisocyanate, then catalyst applied, then skin layers applied. Heated in mould to form polyurea and cure product. column 8, line 32 - column 9, line 27 claims 1,3 figure 3</p> <p style="text-align: center;">-----</p>	1-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/38042

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5582906	A	10-12-1996	US CA	5486256 A 2149180 A1	23-01-1996 18-11-1995
EP 0997265	A	03-05-2000	DE EP	19847795 C1 0997265 A1	04-05-2000 03-05-2000